510(k) Summary
for the Lancer Pedicle Screw System

DEC 15 2011

In accordance with 21 CFR 807.92 of the Federal Code of Regulations
the following 510(k) summary is submitted for the Lancer Pedicle Screw System.

Date Prepared: March 1, 2011

1. **Submitter:**
Spinal Solutions LLC
26157 Jefferson Avenue
Murrieta, CA 92562
(951) 304-9001

Contact Person:
J.D. Webb
The OrthoMedix Group, Inc.
1001 Oakwood Blvd
Round Rock, TX 78681
Telephone: 512-388-0199

2. **Trade name:** Lancer Pedicle Screw System
Common Name: orthosis, pedicle screw system
Classification Name: pedicle screw spinal system
21 CFR Sec. 888.3070
MNH
MNI
Class II

3. **Predicate or legally marketed devices which are substantially equivalent:**
The Lancer Pedicle Screw System is a modification of the Orthopedic Alliance Spine System (K033826). Other predicate devices include:
KRD-1™ - K092420 (SpineFrontier)

4. **Description of the device:**
The Lancer Pedicle Screw System is comprised of polyaxial pedicle screws, rods and crosslinks. The system consists of a variety of color coded top loading pedicle screws. The rods are Ø5.5mm and are available in straight and pre-lordosed (curved) configurations. The cross linkage assemblies fit over the rods to supply torsional stability to the construct.

Purpose of 510(k):
The purpose of this 510(k) is to modifications to the Orthopedic Alliance Spine System. These changes include, changing the geometry of the pedicle screw head, add pedicle screw diameters, screw lengths, rod diameter, pre-bent rods, and rod lengths.

Materials:
The components are manufactured from titanium alloy (Ti 6Al 4V ELI) per ASTM F136.

Function:
The Lancer Pedicle Screw System is a pedicle screw system intended to provide immobilization and the stabilization of spinal segments until fusion takes place.

5. **Substantial equivalence claimed to predicate devices**
Lancer Pedicle Screw System is substantially equivalent to the Orthopedic Alliance Spine System and the KRD-1™ in terms of intended use, design, and materials used. The table below compares the features and characteristics of the Lancer Pedicle Screw System to these predicate devices.

Device Name / Items	Lancer Pedicle Screw System	Orthopedic Alliance Spine System	KRD-1™
Sponsor	Spinal Solutions	Orthopedic Alliance	SpineFrontier
510(k) Number	N/A	K033826	K092420
Device Classification Name	orthosis, spinal pedicle fixation per MNI 888.3070 orthosis, spondylolisthesis spinal fixation per MNH 888.3070	orthosis, spinal pedicle fixation per MNI 888.3070 orthosis, spondylolisthesis spinal fixation per MNH 888.3070	orthosis, spinal pedicle fixation per MNI 888.3070 orthosis, spondylolisthesis spinal fixation per MNH 888.3070
Product Code	MNI, MNH	MNI, MNH	MNI, MNH
Class	Class II per 21 CFR 888.3070	Class II per 21 CFR 888.3070	Class II per 21 CFR 888.3070
Straight rods **Pre-bent rods**	Yes Yes	Yes No	Yes Yes
Rod material	Ti-6Al-4V per ASTM F136	CP titanium per ASTM F67	Ti-6Al-4V per ASTM F136
Screw loading	Tulip top loading	Tulip top loading	Tulip top loading
Screw material	Titanium alloy per ASTM F136	Titanium alloy per ASTM F136	Titanium alloy per ASTM F136
Crosslinks - length	Yes	Yes	Yes
Sterility			

The following devices were used as predicate devices for strength comparison only:

- Synergy VLS – open, K000236 (DePuy)
- Moss Miami SS, K950697 (DePuy)

6. **Intended Use:**

The Lancer Pedicle Screw System is intended to provide immobilization and stabilization of spinal segments in skeletally mature patients as an adjunct to fusion in the treatment of the following acute and chronic instabilities or deformities of thoracic, lumbar, and sacral spine: fracture, dislocation, failed previous fusion (pseudoarthrosis), degenerative spondylolisthesis with objective evidence of neurological impairment, spinal deformations such as scoliosis or kyphosis and loss of stability due to tumors.

When used as a pedicle screw system, the Lancer Pedicle Screw System is intended for the treatment of severe spondylolisthesis (Grade 3 and 4) of the L5-S1 vertebrae in skeletally mature patients receiving fusion by autogenous bone graft having implants attached to the lumbar and sacral spine (L3 to sacrum) with removal of the implants after the attainment of a solid fusion.

7. **Non-clinical Test Summary:**

   The following tests were conducted per ASTM F1717:

   - Static compression bending
   - Static torsion
   - Dynamic compression bending

8. **Clinical Test Summary**

   No clinical studies were performed

9. **Conclusions Nonclinical and Clinical**

   The Lancer Pedicle Screw System is substantially equivalent to the predicate devices in terms of indications for use, design, material, function and strength.

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration
10903 New Hampshire Avenue
Document Control Room –WO66-G609
Silver Spring, MD 20993-0002

DEC 15 2011

Spinal Solutions LLC
% The OrthoMedix Group, Inc.
Mr. J.D. Webb
1001 Oakwood Boulevard
Round Rock, Texas 78681

Re: K110633
Trade/Device Name: Lancer Pedicle Screw System
Regulation Number: 21 CFR 888.3070
Regulation Name: Pedicle screw spinal system
Regulatory Class: Class II
Product Code: MNH, MNI
Dated: November 13, 2011
Received: November 18, 2011

Dear Mr. Webb:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you; however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act

or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); medical device reporting (reporting of medical device-related adverse events) (21 CFR 803); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please go to http://www.fda.gov/AboutFDA/CentersOffices/CDRH/CDRHOffices/ucm115809.htm for the Center for Devices and Radiological Health's (CDRH's) Office of Compliance. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm.

Sincerely yours,

for Mark N. Melkerson
Director
Division of Surgical, Orthopedic
and Restorative Devices
Office of Device Evaluation
Center for Devices and
Radiological Health

Enclosure

Indications for Use

510(k) Number (if known): K110633

Device Name: Lancer Pedicle Screw System

Indications for Use:

The Lancer Pedicle Screw System is intended to provide immobilization and stabilization of spinal segments in skeletally mature patients as an adjunct to fusion in the treatment of the following acute and chronic instabilities or deformities of thoracic, lumbar, and sacral spine: fracture, dislocation, failed previous fusion (pseudoarthrosis), degenerative spondylolisthesis with objective evidence of neurological impairment, spinal deformations such as scoliosis or kyphosis and loss of stability due to tumors.

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Prescription Use X (Part 21 CFR 801 Subpart D)	AND/OR	Over-The-Counter Use _____ (21 CFR 807 Subpart C)

(PLEASE DO NOT WRITE BELOW THIS LINE-CONTINUE ON ANOTHER PAGE OF NEEDED)

Concurrence of CDRH, Office of Device Evaluation (ODE)

(Division Sign-Off)
Division of Surgical, Orthopedic,
and Restorative Devices

510(k) Number K110633